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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,779

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Naoki Yamaguchi

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EXAMINER

CERNOCH, STEVEN MICHAEL

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,779	Applicant(s) YAMAGUCHI ET AL.	
	Examiner STEVEN CERNOCH	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 6 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-11 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Terminal Disclaimer

The terminal disclaimers filed on 10/24/2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on the applications 10/588,437; 10/588,758; 10/588,729 viewed and is accepted. The terminal disclaimer has been recorded.

Allowable Subject Matter

Claim 12 is allowed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "generally" in claim 13 is a relative term which renders the claim indefinite. The term "generally" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The phrase generally flat disc is rendered indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 5, 9, 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al (US Pat No 5,221,050) in view of Gaw et al. (US Pat No 6,318,647 B1) in further view of Valaskovic et al. (US Pat No 6,744,046 B2).

Re claims 1 and 10, Jeffries et al. shows an electrostatic device (Fig. 7) configured and disposed to electrostatically charge and dispense a liquid composition from a supply to a point of dispense, wherein the device comprises: an actuator (column 10, line 8); a high voltage generator (column 7, lines 5-13) to provide a high voltage; a power source (Fig. 7, 96) to activate said actuator and said high voltage generator; a reservoir (column 5, line 48) to contain the supply of said liquid composition; and a nozzle (column 6, line 57) to dispense the liquid composition, said nozzle being disposed at the point of dispense; and wherein the reservoir is configured to provide a removable cartridge (Fig. 5, 58), said reservoir being deformable according to inner pressure (column 5, line 48); a switch for manipulating the power source (Fig. 7, 102

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&106); wherein said device includes a housing (Fig. 7, 80) which carries said actuator, said high voltage generator, said power source, said switch, and said selector.

Jeffries et al. does not show a dispensing unit comprising: a suction pump in immediate downstream relation with the reservoir for supplying the liquid composition from the reservoir, said pump being mechanically connected to said actuator to be driven thereby; an emitter electrode to electrostatically charge the liquid composition, the emitter electrode being electrically connected to said high voltage generator; and a selector for providing a spraying mode and a dripping mode selectively in response to the switch being manipulated; wherein the dripping mode is such that said pump is alone actuated to dispense the liquid composition out through the nozzle absent electrical charge, and wherein the spraying mode is such that said pump as well as the emitter electrode are simultaneously activated to dispense the liquid composition out through the nozzle with the liquid composition being electrically charged at the emitter electrode prior to exiting the nozzle, and wherein said selector comprises a handle, a first tact switch, and a second tact switch, said handle being engaged with a switch knob of said switch to be movable therewith, and having a portion selectively engageable with said first and second tact switches, said first tact switch being mounted on a printed board and connected to operate said high voltage generator and said actuator for executing said spraying mode upon being pressed by said handle, and said second tact switch being mounted on said printed board and connected to operate said actuator for executing said dripping mode upon being pressed by said handle; wherein said dispensing unit is connected to the reservoir to form a removable cartridge

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detachable to the housing that incorporates, an electric motor for rotating the actuator, the high voltage source, the switch, and the selector, said actuator coming into engagement with the pump when said cartridge is attached to the housing thereby enabling the operation of the pump.

However Valaskovic et al. teaches a dispensing unit comprising: a suction pump in immediate downstream relation with the reservoir for supplying the liquid composition from the reservoir (Fig. 10, 2), said pump being mechanically connected to said actuator to be driven thereby; an emitter electrode (4) to electrostatically charge the liquid composition, the emitter electrode being electrically connected to said high voltage generator and a selector (3) for providing a spraying mode and a dripping mode (column 7, lines 63) selectively in response to the switch being manipulated; wherein the dripping mode is such that said pump is alone actuated to dispense the liquid composition out through the nozzle absent electrical charge, and wherein the spraying mode (Fig. 4) is such that said pump as well as the emitter electrode are simultaneously activated to dispense the liquid composition out through the nozzle with the liquid composition being electrically charged at the emitter electrode prior to exiting the nozzle.

Gaw et al. teaches wherein said selector (Fig. 1, 9) comprises a handle, a first tact switch, and a second tact switch (Fig. 9, 9), said handle being engaged with a switch knob of said switch to be movable therewith, and having a portion selectively engageable with said first and second tact switches, said first tact switch being mounted on a printed board and connected to operate said high voltage generator and said

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actuator for executing said spraying mode upon being pressed by said handle, and said second tact switch being mounted on said printed board and connected to operate said actuator for executing said dripping mode upon being pressed by said handle (col. 7, lines 31-35); wherein said dispensing unit (Fig. 3A, 3, 4, 6) is connected to the reservoir to form a removable cartridge (10) detachable to the housing that incorporates, an electric motor for rotating the actuator, the high voltage source, the switch, and the selector, said actuator coming into engagement with the pump when said cartridge is attached to the housing for enabling the operation of the pump.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the pump and electrode of Valaskovic et al. to control the stability of an electrospray process (column 7, lines 40-45) and the switch of Gaw et al. to permit more than one flow rate (col. 7, lines 31-35).

Re claim 5, Jeffries et al. shows wherein said housing is formed on its exterior with an indicator which indicates which one of said dripping mode and said spraying mode is selected (column 4, line 68 to column 5, lines 1-3).

Re claim 9, Jeffries et al. shows an outer cover (Fig. 11, 254) detachable to a housing (200) carrying said high voltage generator, said power source, said dispensing unit, said reservoir, said switch, and said selector, said outer cover being formed with a tab (236) which conceals there behind said switch to keep said device inoperative.

Re claim 13, Jeffries et al. discloses the claimed invention except for said housing has a shape of a generally flat disc. It would have been an obvious matter of

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design choice to shape the housing generally as a flat disc, since applicant has not disclosed that shaping the housing generally as a flat disc solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a housing of any shape.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al (US Pat No 5,221,050) in view of Gaw et al. (US Pat No 6,318,647 B1) in further view of Valaskovic et al. (US Pat No 6,744,046 B2) as applied to claim 2 above, and further in view of Westerweck et al. (US Pub No 2004/0057720).

Re claim 3, Jeffries et al. does not show wherein said selector is exposed on the exterior of said housing to be manipulated by the user's finger, said selector being movable between a dripping position defining said dripping mode and a spraying position defining said spraying mode, said selector surrounding said switch in immediately adjacent relation thereto and rotatable about an axis between said dripping position and said spraying position.

However Westerweck et al. does teach wherein said selector (Fig. 4, 20 & 22) is exposed on the exterior of said housing to be manipulated by the user's finger, said selector being movable (paragraph 0027, lines 3-4) between a dripping position defining said dripping mode and a spraying position defining said spraying mode, said selector surrounding said switch (Fig. 4, 22) in immediately adjacent relation thereto and rotatable about an axis between said dripping position and said spraying position.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the

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switches of Westerweck et al. to reduce the amount of real estate required by the switch (paragraph 0007).

Re claim 4, Jeffries et al. does not show wherein said selector has a lock position which prohibits said motor and the emitter electrode from being activated.

However Westerweck et al. does show wherein said selector has a lock position which prohibits said motor and the emitter electrode from being activated (Paragraph 0028, lines 5-8).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the switch lock of Westerweck et al. to assist in capturing the switch (paragraph 0030, lines 1-5).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al (US Pat No 5,221,050) in view of Gaw et al. (US Pat No 6,318,647 B1) in further view of Valaskovic et al. (US Pat No 6,744,046 B2) as applied to claim 2 above, and further in view of Coffee et al. (US Pat No 6,595,208 B1).

Re claim 7, Jeffries et al. does not show wherein said spraying mode is arranged to start activating said pump after a delay from activating said high voltage generator.

However Coffee et al. does teach wherein said spraying mode is arranged to start activating said pump after a delay from activating said high voltage generator (column 3, lines 35-41)

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Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the delay of Coffee et al. to allow a buildup to occur (column 3, lines 40-41).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al (US Pat No 5,221,050) in view of Gaw et al. (US Pat No 6,318,647 B1) in further view of Valaskovic et al. (US Pat No 6,744,046 B2) as applied to claim 1 above, and further in view of Doeblner et al. (US Pub No 2002/0100815).

Re claim 8, Jeffries et al. does not teach wherein said spraying mode is arranged to include monitoring of the high voltage output from said high voltage generator and to cease activating said high voltage generator and said pump when said monitored high voltage output exceeds a critical level.

However Doeblner et al. does teach wherein said spraying mode is arranged to include monitoring of the high voltage output from said high voltage generator and to cease activating said high voltage generator and said pump when said monitored high voltage output exceeds a critical level (paragraph 0043, lines 3-20).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the voltage monitor of Doeblner et al. in order to control any errors (paragraph 0043, lines 11-20).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al (US Pat No 5,221,050) in view of Gaw et al. (US Pat No 6,318,647 B1) in further

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view of Valaskovic et al. (US Pat No 6,744,046 B2) as applied to claim 1 above, and further in view of Adams et al. (US Pat No 5,512,228).

Re claim 11, Jeffries et al. does not teach wherein said pump has a plug for detachable connection with said reservoir.

However Adams et al. does teach wherein said pump has a plug (Fig. 1, 12) to for detachable connection with said reservoir.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the plug/fitment of Adams et al. for a tamper evident seal (column 1, lines 35-40).

Response to Arguments

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN CERNOCH whose telephone number is (571)270-3540. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. C./

Examiner, Art Unit 3752

/Dinh Q Nguyen/

Primary Examiner, Art Unit 3752